

**AMENDED CLAIMS**

[received by the International Bureau on 12 August 2005 (12.08.2005);  
original claims 1-21 replaced by new claims 22-31]

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22. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and carbon black at a weight rate in a range of 100:1~15 into a particular shape and curing a mixture,

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wherein the carbon flexible heating structure is a reinforcing material of a conductive composition filled with short staples.

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23. The carbon flexible heating structure of claim 22, wherein the diameter of the short staple is 1 through 50  $\mu\text{m}$  and the short staple is one of a glass fiber, a carbon fiber, and a graphite fiber.

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24. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and carbon black at a weight rate in a range of 100:1~15 into a particular shape and curing a mixture, wherein the carbon flexible heating structure has the shape of a mesh, and

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wherein the mesh is a fabric made of a woof and a warp and has port portions formed longer than the woof or the warp of the fabric, and the port portions are formed of a conductive metal wire having superior conductivity.

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25. The carbon flexible heating structure of claim 24, wherein the port portions are tin-plated copper wires or silver wires.

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26. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and carbon black at a weight rate in a range of 100:1~15 into a particular shape and curing a mixture, wherein insulation coating formed of an insulating mixture

obtained by mixing liquid silicon rubber and a diluent and  
agitating a mixture is provided on a surface of the carbon flexible  
heating structure.

27. A carbon flexible heating structure formed by molding a  
conductive composition obtained by mixing liquid silicon rubber  
and graphite powder at a weight rate in a range of 100:10~150  
into a particular shape and curing a mixture,  
wherein the carbon flexible heating structure is a reinforcing  
material of a conductive composition filled with short staples.

28. The carbon flexible heating structure of claim 27, wherein  
the diameter of the short staple is 1 through 50  $\mu\text{m}$  and the short  
staple is one of a glass fiber, a carbon fiber, and a graphite  
fiber.

29. A carbon flexible heating structure formed by molding a  
conductive composition obtained by mixing liquid silicon rubber  
and graphite powder at a weight rate in a range of 100:10~150  
into a particular shape and curing a mixture,  
wherein the carbon flexible heating structure has the shape of  
a mesh, and

wherein the mesh is a fabric made of a woof and a warp and has  
port portions formed longer than the woof or the warp of the  
fabric, and the port portions are formed of a conductive metal  
wire having superior conductivity.

30. The carbon flexible heating structure of claim 29, wherein  
the port portions are tin-plated copper wires or silver wires.

31. A carbon flexible heating structure formed by molding a  
conductive composition obtained by mixing liquid silicon rubber  
and graphite powder at a weight rate in a range of 100:10~150  
into a particular shape and curing a mixture,

5 wherein insulation coating formed of an insulating mixture  
obtained by mixing liquid silicon rubber and a diluent and  
agitating a mixture is provided on a surface of the carbon flexible  
heating structure.